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HISTORIC AMERICAN ENGINEERING RECORD

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Columbia Basin Project, Grand Coulee Dam and Franklin D. Roosevelt Lake
Grand Coulee
Grant County
Washington

HAER No. WA-139-A

Jet Lowe, HAER Photographer, May 1996

WA-139-A-1 View from west side of Columbia River (at transformer spread yard from No. 3 Powerhouse), looking east to downstream face of Grand Coulee Dam.

WA-139-A-2 View of downstream face of Grand Coulee Dam (from just below No. 3 Powerhouse), looking southwest.

WA-139-A-3 View of downstream face of Grand Coulee Dam (from hillside north of No. 3 Powerhouse), looking southwest.

WA-139-A-4 View of upstream face of Grand Coulee Dam, looking west.

WA-139-A-5 View of upstream face of Grand Coulee Dam, looking northeast from the Pumping Plant.

WA-139-A-6 View of upstream face of Grand Coulee Dam, looking northeast. This image features a cloudless sky.)

WA-139-A-7 View of upstream face of Grand Coulee Dam, looking northeast. This image features a partially cloudy sky.)

WA-139-A-8 View of upstream face of the forebay dam of Grand Coulee Dam, looking west. Construction of the forebay dam, which replaced the eastern end of the original Grand Coulee Dam, was completed in 1974.

WA-139-A-9 View of upstream face of the forebay dam of Grand Coulee Dam, looking southwest. Note the trash racks at the entrance to the penstocks.

WA-139-A-10 View of open-spandrel concrete arch that carries the road crossing Grand Coulee Dam over the spillways, looking west. Note the drum gate in its nearly fully raised position.

WA-139-A-11 Detail of trash rack for headgate of Unit No. 10, looking east.

WA-139-A-12 Detail of downstream face of dam showing water being discharged through diversion tube.

WA-139-A-13 View of gantry crane on the east side of the dam, looking east.

WA-139-A-14 View of gantry crane on the east side of the dam, looking south.

WA-139-A-15 View of gantry crane (manufactured by Ederer Corporation, Seattle, Wash., 1971) for Powerhouse No. 3, looking north.

WA-139-A-16 At 1295 Gallery, Block 31, view of truck for hauling coaster gates; note track at perpendicular; the elevator at Block 31 is to the left.

WA-139-A-17 At 1200 Gallery, Block 63, looking west, showing 230 kv cables. These lines were installed in the 1960s and are no longer used.

WA-139-A-18 At 1200 Gallery, Block 63, looking down tunnel that extends to the Right Powerhouse, showing 230 kva lines.

WA-139-A-19 At 1150 Gallery, Block 7, looking east, the length of the dam.

WA-139-A-20 At 1150 Gallery, Block 5, between spiral stairways, looking southwest.

WA-139-A-21 At 1150 Gallery, Block 5, view of top of spiral stairway, looking west.

WA-139-A-22 At 1150 Gallery, Block 5, view of spiral stairway leading to 1200 Gallery, looking south.

WA-139-A-23 View just east of Block 31, 1150 Gallery, looking west showing change in ceiling height; in foreground is transverse gallery used for drum gate cord storage.

WA-139-A-24 At 1050 Gallery, Block 55, view of motors for operating gates of diversion tubes, looking west (Note: the gate control unit to the far right is the one mistakenly left open in 1952 and this led

to the flood inside the dam)

WA-139-A-25 At 1050 Gallery, Block 55, view of gate control and motor, looking west, (Westinghouse Gearmotor, ca. 1939, type CS induction motor, 440 volts, 43 rpm, 60 cycle).

WA-139-A-26 At 1050 Gallery, Block 55, similar view as WA-139-A-25. Joshua Hendy Ironworks, Sunnyvale, California, manufactured the mechanical components of this gate control unit.

WA-139-A-27 At 1050 Gallery, Block 65, view of coaster gate bypass valve (for turbine-generator unit G-10, this bypass-valve unit manufactured by Western Koppers Co., Fort Wayne, Ind., 1938), looking southeast.

WA-139-A-28 At 1050 Gallery, Block 16, view of access port down to top of penstock (this is a service hatch into penstock for turbine-generator unit No. 2), looking north.

WA-139-A-29 At 1050 Gallery, Block 12, two centrifugal pumps, Buffalo Pumps, Buffalo, NY, driven by Allis Chalmers motors (size 3 HSO, head 230, 120 cpm, 1750, rpm, Impulse dia. 15) installed in the 1960s and used for water-cooling system for 230-kv cable; the cables have been removed and the pumps are not currently used.

WA-139-A-30 At 750 Gallery, (sump level) view of drain to sump pumps, looking north. This level contains the "art gallery" which features graffiti from the 1940s-1990s.

WA-139-A-31 Interior of elevator house, Block 11, Otis DC exciter (240 volts, 1200 rpm), Otis DC Generator (280 volts, 1200 rpm), and control panel, view looking west.

WA-139-A-32 Interior of elevator house, Block 11, hoist motor, manufactured by Otis, DC 280 volts, 120 hp, and cable hoist, looking north.

WA-139-A-33 View of elevator tower, Block 31, looking north.

WA-139-A-34 Interior of elevator tower, Block 31, looking northeast. Otis Tandem Gearless Elevator Hoist (1941); floor selector (far left), in foreground is

the motor generator set which includes exciter (left), AC motor (center), DC generator (right); beyond is the passenger motor (right), hoist cable and drum (center), freight motor (left).

WA-139-A-35 Interior of elevator tower, Block 31, looking northeast. Detail of Otis Gearless Double-wrap Traction hoist, showing drum and cable. (Note: Block 31 houses the only freight elevator at Grand Coulee Dam; it has a capacity of 44,000 lbs.)

WA-139-A-36 Interior of elevator tower, Block 31, looking east. Otis Gearless Double-wrap Traction Hoist; note flyball governor in (left) foreground.

WA-139-A-37 Interior of elevator tower, Block 31, looking south. Detail of control panel.